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16 SOFTWARE RIGHTS ARCHIVE, LLC

17 UNITED STATES DISTRICT COURT
18 NORTHERN DISTRICT OF CALIFORNIA
19 OAKLAND DIVISION

20 SOFTWARE RIGHTS ARCHIVE, LLC,

21 Plaintiff,

22 v.

23 FACEBOOK, INC.,

24 Defendant.

Case No. 4:12-cv-03970 HSG

**PLAINTIFF'S MOTION TO COMPEL
DISCOVERY**

Judge: Hon. Haywood S. Gilliam, Jr.

Date: January 23, 2020

Time: 2:00 p.m.

Courtroom 2, 4th Floor

Jury Trial Demanded

1 Plaintiff's Software Rights Archive, LLC ("SRA") hereby renews its prior motion to compel
 2 discovery (Dkt. No. 76) from Defendant Facebook, Inc. ("Facebook") which this Court earlier denied
 3 without prejudice (Dkt. No. 176). To date, despite numerous representations that it has produced all
 4 source code required by this Court's Case Management Order (Dkt. No. 39), Facebook has been forced
 5 to repeatedly supplement its production with belatedly produced code (of orders of magnitude larger
 6 than its initial production including as late as June 2019) yet continues to withhold code necessary for
 7 SRA to ascertain the full extent of infringement of the accused instrumentalities. Accordingly, SRA
 8 respectfully seeks an Order from the Court:

- 9 1. compelling Facebook to produce, by no later than October 1, 2019, all source code and code-
 10 related materials (including, but not limited to, models and data) sufficient to show the complete
 11 operation of any Accused Instrumentality identified by SRA in its Patent L.R. 3-1 disclosures
 12 and to indicate whether each produced model was used in production, and if so, the dates of
 13 usage, or whether each model was experimental;
- 14 2. identify, by page number, where in the produced code base the code or code-related materials
 15 identified by SRA as missing may be found (including identifying the specific system to which
 16 each produced model pertains); and
- 17 3. set a briefing schedule for determining SRA is entitled to attorney and expert fees associated
 18 with drafting this motion and reviewing incomplete code caused by Facebook's failure to
 19 comply with the Court's Case Management and Scheduling Order.

20 I. INTRODUCTION

21 Facebook has wholly failed to meet its obligations to provide SRA with timely and thorough
 22 discovery responses and, in particular, relevant source code and certain code-related materials—
 23 particularly the machine learning models that define the time periods and extent of Facebook's
 24 infringing link analyses. SRA has requested for years the production of specifically identified source
 25 code and code-related materials including these models in Facebook's possession that are relevant to
 26 SRA's case.

27 Despite the clear relevance of SRA's requested code and code-related material, Facebook has
 28 failed to produce the requested materials. Instead, SRA has been forced to spend massive amounts of

time and money to review Facebook's production, only to determine, despite Facebook's representations that it has produced all of the necessary materials, that the materials requested by SRA still has not been produced. Indeed, on August 2, 2013, Facebook produced over [REDACTED] *lines* of code and code related materials concerning the accused instrumentality, seven months after the Court ordered deadline and nearly five months after Facebook first represented *in writing* that all of the code had already been produced. In June 2019, after this case was unstayed, Facebook further produced [REDACTED] of additional code which it had never previously produced, despite repeated reassurances *in 2013* that all requested materials had been produced. Indeed, the 2019 code was greater in size than all previous productions. In reliance of Facebook's assurances that all code has been produced, SRA spent months and hundreds of thousands of dollars on a series of "goose chases," searching for the code related to relevant accused functionality that was, in fact, withheld from the produced code base. Even today, as Facebook asserts that it has substantially complied with its discovery obligation, it continues to withhold over [REDACTED] *human readable models and other code* (including code relating to Facebook's unlicensed use of the "pagerank" algorithm) relating to the systems specifically accused in SRA's infringement contentions.

The withheld human readable models are necessary for SRA to determine the full scope of the infringement of the accused instrumentalities. Facebook should be ordered to finally produce all source code and code-related materials necessary to disclose the operation of the accused instrumentality on October 1, 2019, as well as the other relief specified in this motion.

II. ARGUMENT

A. SRA Has Long Outstanding Requests for Facebook's Human Readable Models and Other Materials that Facebook Has Repeatedly and Falsely Represented as Produced

Pursuant to the CM Order, Facebook was required to produce "source code [and other materials] sufficient to show the operation of any aspects or elements of an Accused Instrumentality" by January 14, 2013. (Dkt. No. 39). On January 29, 2013, SRA served its First Set of Requests for Production on Facebook, which included a detailed listing of the accused Facebook systems and a detailed identification of the source code and code-related materials that SRA requested Facebook produce. The CM Order required, and SRA's RFP's specifically requested, that Facebook provide, *inter alia*, the

1 “models” of SRA’s machine learned systems.¹

2 SRA has informed Facebook *on fourteen separate occasions* that it has failed to produce the
3 required and requested source code and code-related materials, including relevant models: on March 6,
4 May 3, May 24, May 30, June 14, June 17, June 26, July 2, July 3, July 19, July 25, July 29, July 31, and
5 August 1. In doing so, SRA has repeatedly attempted to assist Facebook in satisfying its discovery
6 obligations. For example, on May 3, 2013, SRA identified for Facebook the systems among the accused
7 Facebook systems in which SRA is currently most interested, based on its current understanding of
8 Facebook’s systems. Specifically, SRA identified the following five basic “serving systems” (and their
9 predecessors):

10 [REDACTED]
11 [REDACTED]
12 [REDACTED]

13 Then, on June 7, 2013, SRA identified the signals or features used by the accused Facebook systems in
14 which SRA is currently most interested. SRA’s identification included, *inter alia*:

15 [REDACTED]
16 [REDACTED]

17 Further, as particularly as possible based on the information it has, SRA has identified the code
18 and code-related materials, including models, missing from Facebook’s production. For example, in at
19 least its May 24, July 3, July 25, and July 29, 2013 correspondence, SRA specifically identified
20 particular code and particular models missing from Facebook’s production.

21 Each time SRA has requested or identified code that Facebook has failed to produce, Facebook
22

23 ¹ Because “models” define whether a given input signal is actually used and describe how it is used (*see*
24 Declaration of Greg Bosch, dated June 7, 2013, submitted in support of D.I. 60 (“Bosch Declaration” or
25 “Bosch Decl.”), at ¶19), models are code-related materials necessary “to show the operation” of the
26 accused Facebook system. Indeed, the models are among the most relevant source code-related
27 materials because they represent the code that actually uses the accused analysis of non-semantical
28 relationships necessary to define the scope of infringement.

has responded in contradictory ways: (1) it has represented that it has already produced all relevant code or (2) it has produced additional code—in some instances, very large volumes of additional code—and represented that the code identified as missing by SRA is within the supplemental production. Each time Facebook’s representations have proven blatantly false.

Facebook first represented that it had produced all its “sufficient to show the operation” source code in an email dated March 6, 2013. Facebook repeated the representation in an email dated May 8, 2013. During a meet and confer telephone conference on May 15, 2013, Facebook for a third time represented that all of its code had been produced and that anything SRA believed was missing was a result of SRA’s own failure or inability to properly review the produced code. The facts set forth below belie Facebook’s representations.

During the time that Facebook repeatedly insisted it had provided all of its code, Facebook had produced [REDACTED] million lines of source code from two repositories only (*i.e.*, (1) [REDACTED]; and (2) [REDACTED]). On June 17, 2013, however, Facebook produced an additional [REDACTED] million lines of code or code-related material from a third repository (*i.e.*, [REDACTED]). Although this code consisted of a small fraction of the missing code and code-related materials identified by SRA, it related to and included some models for [REDACTED] and [REDACTED]—*i.e.*, two signals or features that SRA had specifically identified as particularly relevant on June 7, 2013. Despite its clear relevance, Facebook withheld this code for five months.

Next, on July 9, 2013, which was *the day before* the deposition of Facebook’s 30(b)(6) witness Ming Hua, Facebook produced an additional [REDACTED] lines of code from a fourth previously undisclosed repository (*i.e.*, [REDACTED]). This production included additional code related to [REDACTED], [REDACTED], and [REDACTED]. Facebook withheld this code for six months, despite its clear relevance to the accused instrumentality.

On July 10, 2013, Facebook’s 30(b)(6) witness testified that the only source code repositories Facebook had were the four repositories that Facebook had already identified (*i.e.*, (1) [REDACTED]; (2) [REDACTED]; (3) [REDACTED]; and (4) [REDACTED]). But again, Facebook’s representation proved false. Contrary to Ms. Hua’s sworn testimony, on July 22, 2013, Facebook produced an additional [REDACTED] lines of code from a fifth previously undisclosed repository (*i.e.*, [REDACTED]), which includes code related to [REDACTED]

1 [REDACTED], [REDACTED], and a number of other relevant algorithms such as [REDACTED], [REDACTED]
 2 [REDACTED], and [REDACTED]. And, on July 25, 2013, Facebook produced an additional [REDACTED] million lines
 3 of code from a sixth undisclosed repository (*i.e.*, [REDACTED]). Notably, Ms. Hua is listed as a commenter
 4 for many of the source code files within the [REDACTED] repository and indisputably knew of its existence
 5 at the time that she failed to identify these missing source code repositories. The code produced from
 6 [REDACTED] includes code relevant to the creation of [REDACTED] (including [REDACTED]), [REDACTED],
 7 [REDACTED], and the use of [REDACTED] and [REDACTED] by [REDACTED]—*i.e.*, all systems and
 8 signals previously specifically identified by SRA to Facebook. Facebook withheld this code for over
 9 five months, despite its clear relevance to the accused instrumentality.

10 On August 2, 2013, Facebook produced additional code from a seventh undisclosed repository
 11 (*i.e.*, [REDACTED]), as well as additional unproduced code from the two original repositories
 12 [REDACTED] and [REDACTED]. The code includes some but not all models used by [REDACTED]—*i.e.*, a system or
 13 feature that SRA accused of infringement in its Original Complaint, that Facebook admitted in its
 14 Answer it offers, and that SRA specifically identified as among the most important systems on May 3.
 15 Incredibly, Facebook's August 2 supplemental production consists of an additional [REDACTED] million lines of
 16 code.

17 Finally on June 24, 2019, upon resumption of review of Facebook's code after the lifting of the
 18 stay, SRA's expert discovered Facebook's source code production included an additional [REDACTED] terabytes
 19 of newly produced code. ***This is orders of magnitude greater than all of Facebook's previous***
 20 ***productions combined.*** Despite the volume of this production, Facebook continues to withhold human
 21 readable models of the code and signals which are important for SRA's expert to determine the full
 22 scope of infringement of the accused instrumentalities.

23 There is no reasonable explanation or excuse for Facebook's failure to timely produce this code.
 24 Facebook in 2019 produced [REDACTED] terabytes more code than it produced in all of 2013, when it had
 25 repeatedly represented that it had produced all of the relevant code. It is hard to understand how
 26 Facebook could inadvertently withhold [REDACTED] million lines of code after the numerous warnings and
 27 conferences between the parties—and then suddenly discover [REDACTED] further terabytes of code during the
 28 stay. Facebook's withholding of this code and repeated false representations that it had already produced

1 the code is completely unjustifiable given the CM Order requiring Facebook to produce it in January
2 2013.

3 **B. Facebook Continues to Withhold Source Code Related Materials**

4 Despite Facebook's repeated supplemental productions, it has still yet to complete production of
5 source code and source code- related materials. For example, the following code related material was
6 still missing from (or could not be identified within) Facebook's production: (1) code-related materials
7 relating to [REDACTED]; (2) code that uses [REDACTED]; and (3) all of the models
8 used by Facebook produced in a human readable format, particularly [REDACTED]
9 [REDACTED].

10 Facebook's initial response with respect to code relating to [REDACTED] (*i.e.*, item
11 (1) above) was that Facebook has "no indication that any of the requested code has not already been
12 produced." Based on Facebook's prior false representations and because SRA has invested substantial
13 time and resources searching for this code without finding it, SRA requested that Facebook specifically
14 identify the location of this allegedly produced code. After initially refusing this request and after SRA
15 informed Facebook of its intent to raise this issue with the Court, Facebook again proved its own
16 representation false and finally produced the missing [REDACTED].

17 With respect to human readable models, Facebook has repeatedly promised to produce them. As
18 noted in this Court's Order Regarding Discovery Dispute Joint Report # 2 (D.I. 69), Facebook explicitly
19 represented to the Court on June 7, 2013, that it would produce the models. Despite this representation,
20 over [REDACTED] models still have not been produced as of today. Further, SRA has identified several
21 hundred models that Facebook produced but failed to produce in a human readable format and thus that
22 SRA cannot review. Facebook has refused to provide these models in human readable formats and
23 refused to disclose the features used by the models. The production of all of the models for Facebook's
24 machined learning ranking systems and production of them in human readable format is critical to
25 demonstrate the operation of the accused Facebook instrumentality and thus critical to SRA's analysis in
26 this case.

27 SRA is certain these human readable models exist. As shown in the declaration of Greg Bosch
28 (Dkt. No. 85 at ¶16), he has identified code within Facebook's systems that allows for the models to be

1 printed in a human readable format. Indeed, several of the human readable models that have been
 2 produced so far were printed using this functionality. *Id.* The failure to provide them in human readable
 3 format violates the terms of the protective order which provides “Any source code produced in
 4 discovery shall be made available for inspection, in a format allowing it to be reasonably reviewed and
 5 searched.” Patent Local Rule 2-2 Interim Model Protective Order, ¶9(c).² Without human readable
 6 formats of the models, while SRA’s experts has a fair understanding of the operation of Facebook’s
 7 code, it is difficult to determine the full scope of infringement of the accused instrumentalities and,
 8 therefore, Facebook has also violated its obligation to provide documents “sufficient to show the
 9 operation” under Pat. L.R. 3-1 and 3-4.

10 SRA does not know (and cannot know) all of the other code or code-related materials that are
 11 currently missing from Facebook’s production. SRA should not be forced to spend another seven
 12 months and hundreds of thousands of dollars searching through the produced code to identify for
 13 Facebook the code that Facebook has improperly withheld, only to receive further false representations
 14 and/or piecemeal productions from Facebook. Instead, to alleviate this continuing cycle of prejudice to
 15 SRA, Facebook should be compelled to produce all code and code-related materials by October 1, 2019,
 16 including human readable models, relating to the accused Facebook instrumentality. Furthermore, to the
 17 extent that Facebook contends code identified by SRA as missing has been produced, Facebook should
 18 be compelled to identify where within the produced code base that the material may be found.

19 **C. Facebook’s Failure to Produce the Requested Code Severely Prejudices SRA**

20 SRA has been repeatedly subjected to false representations concerning Facebook’s code

21
 22 ² Models, as coded computerized instructions that define an “algorithm” of software, constitute source
 23 code under definition of the Protective Order: “2.9 ‘HIGHLY CONFIDENTIAL – SOURCE CODE’
 24 Information or Items: extremely sensitive ‘Confidential Information or Items’ representing computer
 25 code and associated comments and revision histories, formulas, engineering specifications, or
 26 schematics that define or otherwise describe in detail the algorithms or structure of software or hardware
 27 designs, disclosure of which to another Party or Non-Party would create a substantial risk of serious
 28 harm that could not be avoided by less restrictive means.”

production, which has resulted in a gross waste of SRA's resources. Prior to August 2, 2013, SRA spent no less than \$451,777 reviewing a code base that was missing more than half of the relevant code. To date, SRA has spent over half a million dollars reviewing Facebook source code. *All* of SRA's code reviews have been on an incomplete code base. This is particularly prejudicial because, when SRA could not locate an accused signal through electronic searching, it was forced to manually read through large blocks of code searching for functionality that simply was not there. Where human readable models were missing, SRA has been forced to deduce the functionality of the code (without independent confirmation from the human readable models) to determine the signals by manually reviewing all of the code and observing its functionality, rather than referring to the human readable models. Had the code been produced in its entirety, these signals could have been located without a long and costly manual review of incomplete code.

SRA has also been prejudiced by the fact that it has been deprived adequate time to conduct a full infringement analysis. From the inception of the case, the parties anticipated that the source code review would be an extremely complex and lengthy process, and the Court ordered that SRA have an eight-month period to review code sufficient to demonstrate the operation of the accused instrumentality before serving amended infringement contentions. (Dkt. No. 39 at 2). In the first seven months of that eight month period, Facebook produced a total of [REDACTED] million lines of code. Facebook then produced another [REDACTED] million lines of code on August 2, 2013, and then [REDACTED] terabytes of code (greater than the total amount of code Facebook produced prior to the stay) when SRA resumed review of Facebook's code after lifting of the stay in June 2019. Despite these massive productions, critical elements of the code are still missing or unidentifiable. Importantly, the missing models are necessary for SRA to determine the full scope of infringement of the accused instrumentalities, because human readable formats of the models are required for SRA's experts to ascertain the full extent of Facebook's use of infringing features.

Accordingly, SRA requests that this Court grant this motion in its entirety.

Dated: June 19, 2019

By: /s/ Victor G. Hardy
 Victor G. Hardy (admitted pro hac vice)
 William M. Parrish (admitted pro hac vice)

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